FIVE VARIETAL TRANSFERS OF UNITED STATES TREES

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These nomenclatural transfers for five varieties of United States trees are in the genera Quercus, Ulmus, Cercocarpus, and Prunus (2). They are needed for the Forest Service Check List of the Native and Naturalized Trees of the United States (Including Alaska), now in press.

QUERCUS STELLATA Wang. var. MISSISSIPPIENSIS (Ashe) Little, comb. nov. Delta post oak

Quercus mississippiensis Ashe, Torreya 31: 39. 1931.

This variation of the Mississippi Valley in bottom lands of western Mississippi, southeastern Arkansas, and eastern Louisiana has been distinguished by foresters of the Southern Forest Experiment Station ever since its publication as a species by W. W. Ashe in 1931. Ashe noted that Q. mississippiensis was one of the common oaks on intermediate or better drained classes of alluvial lands of the lower Mississippi Valley. It was a timber tree of importance, its lumber not separated in marketing from upland white oak.

J. A. Putnam and Henry Bull (The trees of the bottomlands of the Mississippi River delta region. U. S. Dept. Agr., Forest Service, Southern Forest Expt. Sta. Occas. Paper 27, 207 pp. 1932. Mimeographed.) described this oak at length (pp. 156-159). Under the heading post oak together with two specific names Quercus stellata Wangenh. and Q. mississippiensis Ashe, they explained that this post oak probably was not the true Q. stellata, which it closely resembles in most respects, and, if not a variety, was the very closely allied newly published species Q. mississippiensis. They observed that this variation differs from Q. stellata in size, quality, and habitat. developing a tall, straight, massive trunk with broad, open crown of stout branches and branchlets. Ordinarily medium-sized, in West Carroll Parish, Louisiana, it often reaches 100 to 110 feet in height and 3 feet or more in diameter. This common bottomland oak occurs throughout the Delta region but principally in second bottoms. Noting that small trees occasionally were confused with small specimens of overcup oak, Q. lyrata Walt., they pointed out the differences between these two in leaves, branchlets, fruit, and bark of large trees (pp. 163-164).

Some years later, Putnam (Management of bottomland hardwoods. U. S. Dept. Agr., Forest Service, Southern Forest Expt. Sta. Occas. Paper 116, 60 pp. 1951) accepted Delta post oak (Q. mississippiensis) as a species in a table of Important Bottomland Species.

The Forest Products Laboratory, in examining wood from a single tree of this variation, reported that the samples showed wider rings, more pronounced springwood pore zone, and more golden color of the heartwood than specimens of Q. stellata but that these differences might be related to site conditions.

Clair A. Brown (Louisiana trees and shrubs. La. Forestry Comm. Bul. 1, 262 pp., illus. 1945) accepted the species Q. mississippiensis Ashe, Mississippi Valley oak (p. 70, fig. 37C) and regarded it as more closely related to Q. lyrata than to Q. stellata. He thought it possibly might prove to be a variety of the former.

Quercus mississippiensis is transferred to varietal status under Q. stellata Wangenh. (Beytr. Teutsch. Holzger. Fortwiss. Nordamer. Holz. 78, pl. 6, fig. 15. 1787). Apparently none of the varietal names published under Q. stellata, including Q. stellata var. attenuata Sarg., is the same.

ULMUS AMERICANA L. var. FLORIDANA (Chapm.) Little, comb. nov. Florida elm

Ulmus floridana Chapm., Fl. Southeast. U. S. 416. 1860.

Some authors have accepted Ulmus floridana Chapm., of the Coastal Plain from eastern North Carolina to central Florida, as a distinct species but others have not. For example, Charles Sprague Sargent (Silva No. Amer. 7: 43. 1895; Man. Trees No. Amer. Ed. 2, corr., p. 309. 1926) listed this name as a synonym of U. americana L., American elm.

Florida botanists report the two to be distinct and to flower at different times. Erdman West and Lillian E. Arnold (The native trees of Florida. 212 pp., illus. 1946) accepted Ulmus floridana Chapm., Florida elm (p. 60, fig.). They suggested that this tree may represent a geographical variety of U. americana L., which, they noted, grows on drier ground, normally has downy twigs, and has converging tips on the fruits. I observed Florida elm in Highlands Hammock State Park near Sebring, Fla.

As no varietal name under U. americana seems applicable, the specific epithet floridana is reduced to a variety of U. americana L. (Sp. Pl. 226. 1753).

CERCOCARPUS

The North American genus Cercocarpus H. B. K., cercocarpus or "mountain-mahogany" (family Rosaceae), is a difficult one, because of numerous puzzling intergrades and hybrids between the extreme forms. The complexity of the variations in western United States is illustrated by two monographs from extreme points of view. Rydberg (No. Amer. Fl. 22: 418-424. 1913) accepted 21 species, including in western United States 8 species of trees and 3 of shrubs. Floyd L. Martin (A revision of Cercocarpus. Brittonia 7: 91-111, illus. (maps). 1950) in a conservative monograph, though with field work confined to southern California, reduced the number of species in this genus to 6. All the variations in western United States were combined into 2 species, C. montanus Raf., composed of 8 varieties, and C. ledifolius Nutt., with 3 varieties.

Many botanists probably will prefer a middle course somewhere between the two extremes, with an intermediate number of species. For example, Kearney and Peebles (Ariz. Flora 388-390. 1951) retained in the revision of their work on Arizona plants (Fl. Pl. Ferns Ariz. U. S. Dept. Agr. Misc. Pub. 423: 406-407. 1942) the same number of species of Cercocarpus, five, though mentioning Martin's reduction to two.

Of the taxa or entities in the United States reaching tree size, Martin accepted six varieties in the two species. Sargent (Man. Trees No. Amer. Ed. 2, corr. 550-555. 1926) had five tree species. Following the reduction of the two local California island species by Dunkle (So. Calif. Acad. Sci. Bul. 39: 1-2. 1940), I accepted three tree species with two additional varieties in the preliminary mimeographed Check List of 1944. These three species were further accepted in my popular illustrated handbook, Southwestern Trees (pp. 58-60, figs. 1950).

Cercocarpus ledifolius var. intercedens Schneid. can be united with C. ledifolius Nutt. as a species without varieties. Both variations occupy almost the same broad range and differ scarcely except in width of the narrow leaves and degree of rolling of the margins.

C. betuloides Nutt. and C. breviflorus A. Gray in Arizona are quite different in habit. The former is generally a tree with a single trunk up to 6 inches in diameter and compact crown, while the latter is usually shrubby or branching from near the base and has open widely spreading branches and long slender twigs. Though their ranges meet in Arizona, the two probably have a different history. C. breviflorus is a species

of the interior mountains of Arizona, New Mexico, trans-Pecos Texas, and northern Mexico, while C. betuloides is a Pacific coast species of the California chaparral. In central Arizona, chiefly in Yavapai and Gila counties, is an island of genuine California chaparral vegetation with a smaller number of species, partly Californian, and including C. betuloides. (Perhaps the rarest of these disjunct species now separated by great expanses of deserts is Fremontia californica Torr. For more than two years I lived in this interesting Arizona chaparral while in forest influences research at the Sierra Ancha Experimental Forest in Gila County.)

C. douglasii Rydb. once was reported as a State record for Arizona by Kearney (Wash. Acad. Sci. Jour. 21: 69. 1931) on authority of a determination by Rydberg but afterwards was reduced by Kearney and Peebles (Fl. Pl. Ferns Ariz. 407. 1942) to synonymy under C. betuloides. In the original description of C. douglasii, C. betulaefolius blancheae Schneid. "in part" was cited in synonymy. C. alnifolius was another segregate.

CERCOCARPUS BETULOIDES Nutt. var. BLANCHEAE (Schneid.) Little, comb. nov. alderleaf cercocarpus

Cercocarpus betulaefolius Nutt. var. blancheae Schneid., Deut. Dendrol. Gesell. Mitt. 14: 127. 1905.
Cercocarpus alnifolius Rydb., No. Amer. Fl. 22: 421. 1913.
Cercocarpus betuloides [var.] alnifolius (Rydb.) Dunkle, South. Calif. Acad. Sci. Bul. 39: 2. 1940.
Cercocarpus montanus Raf. var. blancheae (Schneid.) F. L. Martin, Brittonia 7: 103. 1950.

Cercocarpus betuloides Nutt. (in Torr. & Gray, Fl. No. Amer. 1: 427. 1840; June) in its widespread typical variety, C. betuloides var. betuloides, is found in central Arizona and from western Oregon south through California to northern Lower California, Mexico. Three other varieties of restricted distribution can be maintained, var. macrourus (Rydb.) Jeps. in southwestern Oregon and northern California, var. traskiae (Eastw.) Dunkle of Santa Catalina Island, and var. blancheae, for which the new combination is made, on Santa Rosa, Santa Cruz, and Santa Catalina Islands of California.

When checking these names more than ten years ago, I noted that this new combination might be needed, but the type collections of the United States National Museum (US) were then in protective storage. Martin took up the older varietal epithet and designated Blanche Trask in 1896 (Mo) as the lectotype of C. betulaefolius Nutt. var. blancheae Schneid. C. alnifolius Rydb. (type US 340025, seen) was based upon the same collection.

VARIETIES OF PRUNUS SEROTINA EHRH.

Rogers McVaugh (A revision of the North American black cherries (Prunus serotina Ehrh., and relatives). Brittonia 7: 279-315. 1951) in a conservative monograph has united several species with Prunus serotina Ehrh., black cherry, recognizing five subspecies, one further subdivided into two varieties.

In Forest Service Check Lists, subdivisions of species are cited as varieties, not subspecies. Accordingly, the five subspecies of Prunus serotina Ehrh. are here treated as varieties, two of which are new combinations. A summary of the nomenclature follows. Additional synonyms were listed by McVaugh and by Alfred Rehder (Bibliog. Cult. Trees Shrubs 345. 1949).

Prunus serotina Ehrh. black cherry

Prunus serotina Ehrh., Beitr. Naturk. 3: 20. 1788.

Prunus serotina var. serotina black cherry (typical)

Prunus serotina Ehrh., Beitr. Naturk. 3: 20. 1788.
Prunus serotina subsp. serotina var. serotina (McVaugh, Brittonia 7: 295. 1951).

PRUNUS SEROTINA Ehrh. var. ALABAMENSIS (Mohr) Little, comb. nov. Alabama black cherry

Prunus hirsutus Ell., Sketch Bot. S.-C. 1: 541. 1821.
Prunus alabamensis Mohr, Torrey Bot. Club Bul. 26: 118. 1899.
Prunus cuthbertii Small, Torrey Bot. Club Bul. 28: 290. 1901.
Prunus australis Beadle, Biltmore Bot. Studies 1: 162. 1902.
Padus alabamensis (Mohr) Small, Fl. Southeast. U. S. 574, 1331. 1903.
Padus cuthbertii (Small) Small, Fl. Southeast. U. S. 574, 1331. 1903.
Prunus serotina [f.?] 6. alabamensis (Mohr) Schneid. ex Schwerin, Deut. Dendrol. Gesell. Mitt. 1906 (15): 3. [1907].
Prunus serotina subsp. hirsuta (Ell.) McVaugh, Brittonia 7: 299. 1951.

The epithet alabamensis was used as a trinomial before hirsutus. P. serotina alabamensis was published by Schwerin apparently as a form, credited to Schneider (Illus. Handb. Laubholzk. 1: 643. 1906). However, Schneider expressed belief that Padus alabamensis was a local form without making a trinomial. The type of Prunus alabamensis Mohr (C. Mohr, May 11, 1898, near Birmingham, Ala., US 338624, US 772666) has been examined.

PRUNUS SEROTINA Ehrh. var. EXIMIA (Small) Little, comb. nov. Escarpment cherry

Prunus eximia Small, Torreya 1: 146. 1901.
Padus eximia (Small) Small, Fl. Southeast. U. S. 573, 1331. 1903.

Prunus serotina subsp. eximia (Small) McVaugh, Brittonia 7: 302. 1951.

An isotype of Prunus eximia Small (A. A. Heller 1592, US 213849) has been examined.

Prunus serotina var. rufula (Woot. & Standl.) McVaugh
southwestern black cherry

Prunus salicifolia H. B. K. var. acutifolia S. Wats., Amer. Acad. Arts Sci. Proc. 22: 411. 1887; nom. provisor.

Padus rufula Woot. & Standl., U. S. Natl. Mus. Contrib. U. S. Natl. Herbarium 16: 132. 1913.

Padus virens Woot. & Standl., U. S. Natl. Mus. Contrib. U. S. Natl. Herbarium 16: 133. 1913.

Prunus virens (Woot. & Standl.) Shreve, Carnegie Inst. Wash. Pub. 217: 43. 1915.

Prunus virens var. rufula (Woot. & Standl.) Sarg., Arnold Arboretum Jour. 2: 117. 1920.

Prunus rufula (Woot. & Standl.) Tidestr., Biol. Soc. Wash. Proc. 48: 39. 1935.

Prunus parksii Cory, Rhodora 45: 326. 1943.

Prunus serotina subsp. virens (Woot. Standl.) McVaugh, Brittonia 7: 303. 1951.

Prunus serotina subsp. virens var. virens (Woot. Standl.) McVaugh, Brittonia 7: 305. 1951.

Prunus serotina subsp. virens var. rufula (Woot. Standl.) McVaugh, Brittonia 7: 307. 1951.

McVaugh (pp. 304-305) rejected the oldest varietal epithet by Watson as a provisional name. The southwestern variations Padus rufula and Padus virens, differing in pubescence and intergrading, do not merit separate names. They were united by Sargent, who reduced the former to Prunus virens var. rufula. When both are combined as one variety of Prunus serotina, the oldest varietal epithet thus remains var. rufula. McVaugh published the variety as a quadrinomial, here cited as a ternary combination.

Prunus serotina var. salicifolia (H. H. K.) Koehne
capulin black cherry

Prunus capuli Cav., Anal. Hist. Nat. [Madrid] 2: 110. 1800.

Prunus salicifolia H. B. K., Nov. Gen. Sp. 6: 241, pl. 563. 1824.

Prunus serotina β salicifolia (H. B. K.) Koehne, Deutsche Dendr. 305. 1893.

Prunus serotina subsp. capuli (Cav.) McVaugh, Brittonia 7: 308. 1951.

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